CLAIMS

1/ A disk prosthesis for cervical vertebrae, the prosthesis being of the type comprising:

- first and second plates designed to be fixed to adjacent cervical vertebrae; and

- a ball joint interposed between the two plates mounted in a superposed position, the joint being constituted by a spherical cap co-operating with a spherical cup,

wherein:

- the spherical cap is provided on a first insert, while the spherical cup is provided on a second insert;

- each insert is made of a ceramic material and possesses a base of circular right cross-section;

- one of the inserts is mounted on the first plate while the other insert is mounted on the second plate in such a manner that the center of rotation of the joint lies substantially centered relative to the edges of the plates so as to be centered in the sagittal plane and in the frontal plane of the vertebrae;

- the spherical cup possesses a contact area that is not less than the contact area of the spherical cap and is connected via an annular molding to the base of the insert; and

- the plate provided with the insert having the spherical cap has an annular setback to leave clearance for the annular molding of the spherical cup during movements of the plates.

2/ A disk prosthesis according to claim 1, wherein each plate is organized to present a blind housing for receiving an insert.

3/ A disk prosthesis according to claim 1, wherein each plate is organized to present a blind housing for receiving an insert, and wherein each insert possesses a base whose circular right cross-section tapers from the

spherical cap or the spherical cup, and matches the blind housing of complementary profile.

4/ A disk prosthesis according to claim 1, wherein the inserts are made of ceramic materials of different hardnesses.

5/ A disk prosthesis according to claim 4, wherein the insert fitted with the spherical cup is made of zirconium oxide, while the insert fitted with the spherical cap is made of aluminum oxide.

6/ A disk prosthesis according to claim 2, including a damping element mounted in the end of the blind housing so as to be interposed between the insert and the plate.

7/ A disk prosthesis according to claim 1, wherein the plate fitted with the spherical cap extends over the plate fitted with the spherical cup.

8/ A disk prosthesis according to claim 1, wherein the plate extending over the other plate has a top outer face that presents a profile that is convex in the sagittal plane.

9/ A disk prosthesis according to claim 1, wherein each plate possesses an outer face of profile that is plane.

10/ A disk prosthesis according to claim 8, wherein the outer face of at least one of the plates is provided with anchoring notches for anchoring in the vertebrae.

11/ A disk prosthesis according to claim 10, wherein the anchoring notches are constituted by ribs that are parallel to one another and parallel to the posterior edges of the plates.

12/ A disk prosthesis according to claim 8, wherein the outer face of at least one of the plates is provided with two studs for preventing the cage from sliding.

13/ A disk prosthesis according to claim 1, wherein each plate is provided on its posterior edges with two positioning holes for the studs of a tool for holding both plates simultaneously, which plates, when in this position, form an insertion cone in the sagittal plane.

14/ A disk prosthesis according to claim 1, wherein each plate has an anterior edge of profile that is concave in the transverse plane.